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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/056,029	04/30/1993	JOSEPH S. BOYCE	FM-112J	1593

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EXAMINER
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YOUNG, MICAH PAUL

ART UNIT	PAPER NUMBER
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1615

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DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

08/056,029

Applicant(s)

BOYCE ET AL.

Examiner

Micah-Paul Young

Art Unit

1615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 March 1998.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,9-19,22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,9-19,22 and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

**Prosecution has been reopened in view of newly applied grounds of rejection.**

Claims 5, 8, 20, 21 and 23 are withdrawn from consideration. Claims 1-4, 6, 7, 9-19, 22, and 24 are pending.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2, 4, 6, 7, 9, 10, 12, 14-16, 18, and 22 rejected under 35 U.S.C. 102(b) as being anticipated by Scollard (USPN 4,861,643 hereafter referred to as '643). The claims are drawn to a method of joining two composite parts using reinforcing elements comprising assembling the composite parts so that reinforcing elements run through both parts. An adherent is added between the two composite parts. The resultant combination is further cured.
2. '643 discloses a method for joining composite airplane parts where the parts are reinforced and filled with an adherent and further cured (abstract). As seen in the figures, graphite composite parts 10 and 12 are joined by a void filler 29, which overflows into the space between the parts 28. Pressure is applied via shapers 26 and 27 and the two composite parts are held in position while the construct is cured. Reinforcing rivets 33 are drilled through rivet holes 22 to add addition support (col. 3, lin. 53 – col. 5, lin. 13); they are anchored in place after the

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curing process. The void filler is coated with metal such as nickel or copper (col. 3, lin. 25 – 34).

These disclosures render the claims anticipated.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 3, 11, 13, 17, 19, and 24 rejected under 35 U.S.C. 103(a) as being unpatentable the combined disclosures of Scollard (USPN 4,861,643 hereafter referred to as '643) and Boyce et al (USPN 4,808,461 hereafter referred to as '461). The claims are drawn to a method of joining two composite Prepreg parts using reinforcing fibers elements comprising assembling the composite parts so that reinforcing elements run through both parts. An adherent is added between the two composite parts.

5. As discussed above '643 discloses a method of joining two composite parts. The reference however differs from some of the claims. '643 does not disclose the composite parts as prepreg parts, or the reinforcing elements as fibers.

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6. '461 discloses a method for reinforcing composite prepreg airline parts. As seen in figure 8, the reinforcing fiber elements 14', which run through the length of each composite part 56 to 60 and 58 to 60. However no adherent is added to the space between parts 56 and 58 when they are joined to part 60. Yet, a skilled artisan might be motivated to include an adherent as seen in '643 to fill in possible voids between the composite parts. The void filler, as seen in '643 would act as an adherent with the reinforcing fibers forced through the length of the prepreg parts in the Z axis direction. Since '461 applies heat and pressure to force the reinforcing elements through the composite parts, it would be within the level of skill in the art to continue the procedure for adhering two parts together as shown in figure 8.

7. With these disclosures in mind a skilled artisan would be motivated to include a space filling adherent as seen in '643 in order to add structural stability to a combination of joined parts. A skilled artisan would have applied the concept of joining and reinforcing the parts even non-composite parts, since they two would benefit from such a process. A skilled artisan would be motivated to combine the disclosures as such with an expected result of method from joining prepreg composite parts with reinforcing fibers.

### *Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Micah-Paul Young whose telephone number is 703-308-7005. The examiner can normally be reached on M-F 7:00-4:30 every other Monday off.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K Page can be reached on 703-308-2927. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.

Micah-Paul Young  
Examiner  
Art Unit 1615

MP Young

  
THURMAN K. PAGE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600